## ABSTRACT

The present invention is a separation process for producing a methanol, ethanol and/or dimethyl ether stream from a first stream containing $C_3$+ hydrocarbons. The first stream comprises $C_3$+ hydrocarbons, methanol, ethanol and/or dimethyl ether. The process comprises the step of passing the first stream through an adsorbent bed having a crystalline microporous material that preferentially adsorbs methanol, ethanol and/or dimethyl ether over the $C_3$+ hydrocarbons.